

What is Restoration?

[\(From the Environmental Protection Agency's website\)](#)

[The National Research Council \(NRC\)](#), in its 1992 report, *Restoration of Aquatic Ecosystems*, defined restoration as the "return of an ecosystem to a close approximation of its condition prior to disturbance." That report also states, "The term restoration means the reestablishment of predisturbance aquatic functions and related physical, chemical and biological characteristics (Cairns, 1988; Magnuson et. al., 1980; Lewis, 1989). Restoration is ... a holistic process not achieved through the isolated manipulation of individual elements.

The holistic nature of restoration, including the reintroduction of animals, needs to be emphasized ... Merely recreating a form without the functions, or the functions in an artificial configuration bearing little resemblance to a natural form, does not constitute restoration. The objective is to emulate a natural, self-regulating system that is integrated ecologically with the landscape in which it occurs. Often, restoration requires one or more of the following processes: reconstruction of antecedent physical conditions, chemical adjustment of the soil and water; and biological manipulation, including the reintroduction of absent native flora and fauna..."

The NRC report also advises: "Without an active and ambitious program in the United States, our swelling population and its increasing stresses on aquatic ecosystems will certainly reduce the quality of human life for present and future generations. By embarking now on a major national aquatic ecosystem restoration program, the United States can set an example of aquatic resource stewardship that ultimately will also improve the management of other resource types and will set an international example of environmental leadership."

Gwin, et al. (1999) state that restoration requires knowledge of the wetland type prior to disturbance; restoration has the goal of returning the wetland to that type. However, Lewis (1989) notes that "it is not necessary to have complete knowledge of what those pre-existing conditions were; it is enough to know a wetland of whatever type was there and to have as a goal to return to that same wetland...it is not necessary that a system be returned to a pristine condition." He also finds that restoration may occur when a degraded wetland is returned to a previous condition of ecological functioning, although that previous condition may have also been altered by human activity.

[The Society for Ecological Restoration \(SER\)](#) includes sustainable cultural activities, such as those practiced by indigenous peoples, in its current definition of restoration. SER defines ecological restoration as "the process of assisting the recovery and management of ecological integrity. Ecological integrity includes a critical range of variability in biodiversity, ecological processes and structures, regional and historical context, and sustainable cultural practices."

There are also numerous restoration-related activities that differ in some important way from the definitions given above.

For more information about this and about Wetland Tracking, Mitigation, etc., visit [EPA's website](#).